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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,795	02/15/2001	Francis J. Bensus	9325-37	3418

23973 7590 02/28/2003

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EXAMINER

NOLAN, SANDRA M

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 02/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-7

Office Action Summary	Application No.	Applicant(s)	
	09/783,795	BENSUR, FRANCIS J.	
	Examiner	Art Unit	
	Sandra M. Nolan	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Claims

1. Claims 1-23 are pending.

Rejection Withdrawn

2. The 35 USC 112 rejection of claim 9 as indefinite, as set out in section 4 of the 12 August 2002 office action (Paper No. 4), is withdrawn in view of applicant's amendment to that claim in the response dated 17 December 2002 (Paper No. 6).

Rejections Maintained

3. The 35 USC 103 rejection of claims 1-5, 7, 11-17, 19-21 and 23, as unpatentable over Matsumoto et al (US 5,763,-28) in view of Qian et al (US 6,407,155), as recited in section 6 of Paper No.4, is maintained for reasons of record.
4. The 35 USC 103 rejection of claims 6, 8, 9, 18 and 22 as unpatentable over Matsumoto and Qian in view of Ohsima et al (US 4,903,841), as expressed in section 7 of Paper No. 4, is maintained for reasons of record.
5. The 35 USC 103 rejection of claim 10 as unpatentable over Matsumoto, Qian, Kunz et al (US 5,387,449) and Sentendrey (US 5,486,408), as set forth in section 8 of Paper No. 4, is maintained for reasons of record.

New Rejection

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 9 has been amended to insert "the bonding of adjacent layers within the laminate portions is not effected by the welding of the polypropylene". The quoted phrase is not recited in the original application.

Please delete the newly-inserted phrase or point to the passage in the specification that supports it.

The examiner notes that the passage at page 3, lines 19-23 of the specification does not support the newly-inserted language.

Response to Arguments

8. Applicant's arguments filed in Paper No. 6 have been fully considered but they are not persuasive.

The arguments in Paper No. 6 will be responded to in the order in which they were presented there. Unless otherwise indicated, the page numbers indicated are pages in Paper No. 6.

The arguments on page 2 regarding the 35 USC 112 rejection have been rendered moot by the withdrawal of that rejection.

On page 3, applicant argues that Matsumoto fails to disclose or suggest the use of an adhesive containing clay particles.

However, the examiner acknowledged that fact on page 3 of Paper No. 4. It is important to note that Matsumoto *does* teach polyurethane adhesive layers in its laminates (see col. 6, lines 17 and 22 of the patent), although those layers do not contain the exfoliated clay particles recited in applicant's claims.

On page 3, applicant argues that Qian's coupling agent reacted onium ion intercalated silicate ("CAO material") is useful for making "***sheets, films and panels***" [Applicant's emphasis.], but is not useful for making laminates in the manner claimed in claim 1.

However, Qian teaches the use of its (a) CAO material with (b) urethanes (col. 14, lines 37),) and (c) in laminates (col. 20, line 64) having (d) improved barrier properties (col. 21, lines 23+). It is not clear to the examiner how the Qian teachings are seen as not suggestive of the "manner claimed in claim 1", since claim 1 calls for a laminate (c) containing a polyurethane (b) containing exfoliated clay (a) that forms a barrier (d) to the passage of gasses.

On page 3, applicant argues that, even if one were motivated to combine the teachings of the Matsumoto and Qian references, their teachings would suggest putting the CAO into the film layers of the laminate and "**not in the adhesive used to bond the film layers of the laminate**" [Applicant's emphasis.].

However, as the analysis of features (a) through (d), above, shows Qian suggests several of the limitations recited in the claims.

Furthermore, an adhesive that joins two layers of the laminate will form an additional layer within that laminate. In other words, a clay-containing urethane

adhesive used between two laminated layers becomes a clay-containing intermediate layer in the finished laminate.

On page 3, applicant argues that the references' teachings fail to support the modification of the Matsumoto laminate in a way that suggests the laminate of claim 1.

However, in terms of ingredients, the Matsumoto patent lacks only the clay additive (see page 3 of Paper No. 4), which Qian uses. And Qian—as has been discussed above—supplies all of the other ingredients used in applicant's laminates. Since the references are analogous because they both deal with films, their teachings are properly combined and a prima facie case of obviousness has been made out.

On page 3, applicant argues that the teaching of the claims cannot be supplied by their hindsight use in the rejection.

However, the combination of teachings here is suggested by the references themselves and not by the hindsight use of applicant's disclosure. See the discussion of the features of shown by both references above.

On pages 4-6 of Paper No. 6, applicants argue repeatedly that no single reference teaches clay particles in polyurethane adhesives for the laminate recited in applicant's claims.

However, the examiner acknowledges that this is not a 35 USC 102 rejection and maintains that the combined teachings of Matsumoto and Qian suggest all of the claimed features of applicant's claims 1-5, 7, 11-17, 19-21 and 23.

On page 4, applicant argues that Ohsima fails to teach a polyurethanes containing clay platelets for bonding layers of a laminate and supplying barrier properties.

However, Qian does.

On pages 5 and 6, applicant argues that Kunz and Sentendrey fail to teach polyurethanes containing clay platelets as bonding layers that supply barrier properties.

However, Qian does.

In sum, the Matsumoto and Qian teachings, when combined, suggest the use of clay-containing polyurethane adhesives in laminates. In addition, the Ohsima, Kunz and Sentendrey references teach, respectively, polypropylene sealable layers (Ohsima), solvent-free polyurethane adhesive layers (Kunz), and isocyanate-terminated polyester/polyol-terminated polyester combinations in two-part polyurethane adhesives (Sentendrey). When combined, the references supply or suggest all of the features of the claims to which they were applied.

Final Rejection

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication should be directed to the Examiner, Sandra M. Nolan, whose telephone number is 703/308-9545. The Examiner can normally be reached on Monday through Thursday, from 6:30 am to 4:00 pm, Eastern Time.

If attempts to reach the Examiner by telephone are unsuccessful, her supervisor, Harold Pyon, can be reached at 703/308-4251. The general fax number for the art unit is 703/305-5436. The fax number for after final communications is 703/872-9310. The receptionist answers 703/308-0661.



S. M. Nolan
Patent Examiner
Technology Center 1700

SMN/smn
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